WRIGHT (J.)

A Few Remarks on some Cases of Mycosis of the Nose and Throat.

BY

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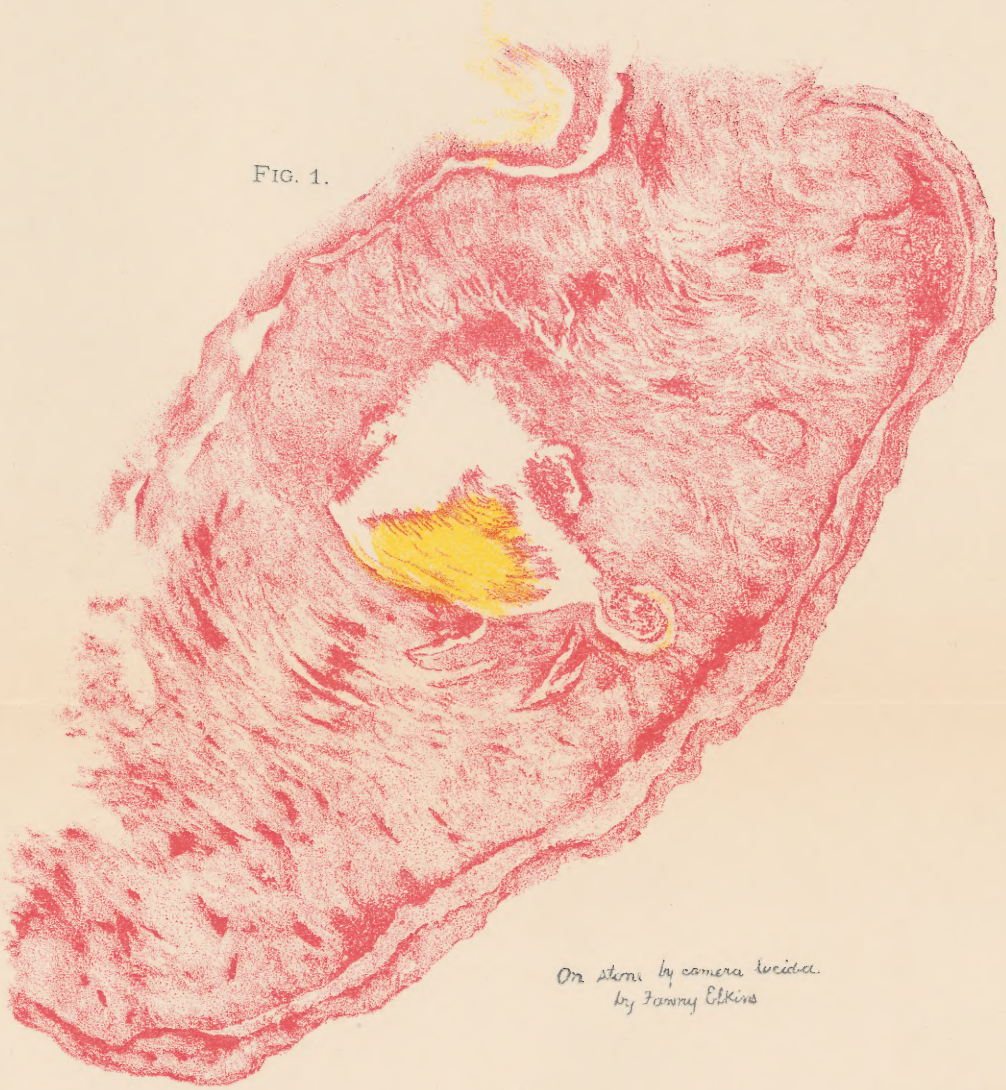
FIG. 1.



On stone by camera lucida.
by Fanny Elkins

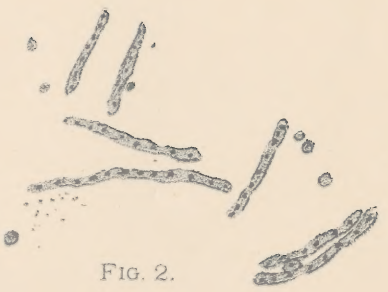


FIG. 2.

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A FEW REMARKS ON SOME CASES OF MYCOSIS OF THE NOSE AND THROAT.*

By JONATHAN WRIGHT, M. D.

The mycotic growths to which this paper especially refers are of that form known as *Leptothrix buccalis*. Dr. Toeplitz, Dr. Gruening, Dr. F. I. Knight, Dr. Hemenway, Dr. Vander Poel, Dr. Newcomb, and others in America, and many abroad, have almost exhausted this topic. In Dr. Hemenway's excellent article in the *Journal of Laryngology*, February, 1892, there is a full bibliography. My only wish, in these few notes, is to draw your attention to some points which have interested me in a few cases I have lately seen.

Klebs † says in regard to the *Leptothrix buccalis*: "We must classify them with the lime-building algæ, and seek their nearest related forms outside of the human body among the lime algæ which occur in sweet and salt water, and possess special importance for certain geological formations."

The *Leptothrix buccalis* itself has not, so far as I know, been cultivated outside of the body, not even in water to which lime has been added. It is always found in the secretions which gather around healthy but uncared-for teeth. It is found in rhinoliths, tonsillar concretions, and stones in the bladder, and is supposed by many to be the cause of dental caries, since it is invariably present in the cavities of carious teeth, but, as Klebs remarks, it can hardly be considered the primal cause. Since it is an organism

* Read before the New York Academy of Medicine, April 24, 1895.

† *Allgemeine Pathologie*, vol. i, p. 274.

which precipitates lime salts from fluids holding them in solution, it probably finds in carious cavities a suitable soil for its growth. It has been observed in gangrenous pulmonary cavities. It is very frequently met with in tonsillar crypts, even when there is no indication of the condition which we know clinically as mycosis pharyngis or tonsillaris. I have recently found it microscopically in the depressions between the protuberances of nasopharyngeal lymphoid hypertrophy. It has been seen in the acini of the glands of the mucous membrane, though I myself have never noticed it there in microscopic sections. From these considerations, then, we may reason that some conditions following chronic inflammation favor the growth of the fungus. It may have some connection with the desquamation of epithelial cells, the exudation of round cells or of nuclei, or the growth of certain other forms of micro-organisms, since we find all these mingled with the mycelial mass in the tonsillar crypts, and in the depths of acinous glands. This, however, it must be remembered, is pure conjecture. Digestive disturbances have been noticed in many cases, and have been supposed to have something to do with the growth; but I have seen many cases without any appreciable indigestion. It is probable, however, that the latter is an ætiological link which connects dental caries and the leptothrix. It is probable also that atmospheric influences have a good deal to do with the growth, as a change of air and locality seems really to be the only efficacious remedy we can resort to.

Mycosis pharyngis is apparently a fairly common affection. By this term, of course, we mean the overgrowth of a fungus in the minute depressions of the mucous membrane to such a degree as to appear on the surface in the form of white spots of varying extent. For the first few years of my work in the nose and throat I saw very few cases, but latterly, since I have been more familiar with the disease, I see perhaps six or seven cases a year. I presume I overlooked them at first, for they do not always present a very striking appearance, and frequently give rise to no symptoms.

The following four cases are selected from a number I have seen in the last year or two:

Case I was that of a healthy-looking young girl who came to my office several months ago for some postnasal dropping and some vaso-motor nasal obstruction. Her mother had noticed white spots in her throat since last fall, but they had apparently given her no inconvenience. There were a few white plugs in the mouths of the tonsillar crypts which could not be wiped out. On the posterior pharyngeal wall and extending well up into the postnasal space were innumerable little, hardly visible, waving, white, hairlike threads, apparently several millimetres long. They seemed to spring from the mouths of the pharyngeal glands. Microscopical examination revealed the *Leptothrix buccalis*. As she had once had a severe attack of diphtheria her mother was a little uneasy at their presence, which she had discovered in the tonsils, not having observed, of course, the fine pharyngeal growth.

I told them I could not do much for the white spots, and as they gave rise to no symptoms, I advised her to defer treatment for them until they did give her trouble. I had her use a nasal douche for her catarrhal trouble, and, very much to my surprise, in two weeks every vestige of the mycotic growth had disappeared. One or two of the larger plugs in the tonsils were touched several times with a solution of iodine, but no treatment beyond the alkaline douche was directed to the other growths.

I have used without success all sorts of treatment in the fifteen or twenty other cases I have seen. Cauterization in my hands has been of no avail except on the tonsils; on the pharynx, the base of the tongue, and the faucial pillars it is always painful. Such cases, we must believe, finally end in recovery of themselves, and I mention this one case as an illustration of the fallacy of alleging a cure from the many kinds of local applications that have been urged for the trouble. If the doctor's faith and the victim's purse and patience hold out, he will probably recover under treatment, but not on account of it. It is unreasonable to think that any surface application can be effectually made to the bottom of acinous glands. As long as the soil is suitable the fungus will grow, however much you may burn off or paint the tops of its projecting sprouts.

Cases II and III, also in private patients, occurred in two sisters, fourteen and fifteen years of age. They were healthy persons with their previous history identical. One had been subject to slight but pretty constant sore throat

for two years, and the other for three years. Both had had measles six years before. Both had slightly enlarged tonsils, with some lymphoid hypertrophy in the postnasal space. Both had some mycotic growth on the tonsils, but more on the posterior pharyngeal wall. I cut off all I could of the tonsillar tissue in both cases, and I am able to show you a section of one of them stained with lithio-carmin. A few crystals of picric acid were added to the alcohol just before the sections were put into the clarifying oil, and it will be seen in Fig. 1 what a brilliant yellow stain the leptothrix threads have taken. The principal mass of them will be seen to lie in a crypt which has been cut transversely, while in a small depression on the surface there is a smaller mass. The growth does not penetrate the epithelial layer at all, but lies in immediate contact with it. This is under a very low magnifying power. With a high power desquamated epithelial and round cells can be seen among the mycelial threads, and at the ends, in the illustration, the carmin stain has tinged them.

Fig. 2 represents some of the mycelial threads (under one-twelfth homogeneous immersion objective) which are shorter and have taken a deeper stain than others. These sections were stained with gentian violet and decolorized by Gram's method. It will be seen that these rods show, both within their calibre and around them, unmistakable spores. Nothing can be seen with any power or stain of any variation in the calibre of the leptothrix threads or of any joints in them.

I desire especially to draw attention to the brilliant stain these growths take with picric acid, which by its intensity distinguishes them sharply from the usual elements of the tonsil. It seems a very simple method of demonstrating them in sections.

Of course, in these two cases of sisters we can not suppose there was any contagion from one to the other, since we know that practically the growth exists in all mouths, but a similar environment and a similar individual tendency probably combined to prepare a favorable soil for the development of the clinical condition in both sisters. I had these two patients come to my office yesterday for inspection. They had not returned since the amygdalotomy be-

cause, they declared, all their symptoms had been relieved. They still had a few points of mycotic growth on the posterior pharyngeal wall, but very much less than before, and none in the tonsillar region.

Mycosis of the Nose. — Case IV I recently saw at the Woman's Medical College. A middle-aged woman had some mycotic-looking white patches on the roof of the nasopharynx; but what especially attracted my attention were one or two pearly-white minute spots on the mucous membrane covering the anterior end of the inferior turbinated bone on each side. They could not be brushed away with cotton. Examination under the microscope showed them to consist partly of mycelial threads. The character of the growth in the nasopharynx was not ascertained. I have not thus far noticed the reports in literature of any growths occurring in the nose.

It becomes apparent, from these and other cases reported, that mycosis may be observed clinically and microscopically in any situation in the air tract where the unknown condition is favorable to their growth. In closing, I may add my own testimony to that of all others who have written extensively on the subject—viz., that the disease seems to be almost confined to women. I have never seen more than one or two cases in men.